

**PRODUCTION OF POLYETHER MONOALCOHOL**

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Applicant(s):: HODOGAYA CHEM CO LTD  
Requested Patent: JP63105029  
Application Number: JP19860249730 19861022  
Priority Number(s):  
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EC Classification:  
Equivalents:

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**Abstract**

**PURPOSE:** To easily obtain the titled alcohol wherein one of both terminals is quantitatively capped, at a low cost, by polymerizing THF in the presence of an active hydrogen-containing compound using a Lewis acid and a cyclic ether as polymerization initiators.

**CONSTITUTION:** A polyether monoalcohol is produced by polymerizing tetrahydrofuran in the presence of a compound containing one active hydrogen atom in one molecule using a Lewis acid and a 3-4-membered cyclic ether. The active hydrogen-containing compound is a compound having hydroxyl group, carboxyl group or thiol group, e.g. methanol, cyclohexanol, etc., and the ether is selected from epoxides or oxetanes.

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PN - JP63105029 A 19880510  
TI - PRODUCTION OF POLYETHER MONOALCOHOL  
FI - C07C43/11 ; C08G65/26&NQN ; C07C41/00&X ; C07C67/00&X ; C08G65/26  
PA - HODOGAYA CHEMICAL CO LTD  
IN - OKABE KENSHO; TAKEUCHI SHUICHI  
CT - JP38005442 A [ ]; JP50102698 A [ ]; JP63105030 A [ ]  
AP - JP19860249730 19861022  
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DT - |

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AN - 1988-165785 [24]  
TI - Polyether-mono:alcohol for prepn. of polyurethane resin - prepd. by polymerising THF in presence of active hydrogen cpd. and initiator contg. Lewis acid and cyclic ether  
AB - J63105029 Polyethermonoalcohol is prepd. by polymerising THF in the presence of a cpd. with one active H atom in it and polymerisation initiator comprising a Lewis acid a 3- or 4-membered cyclic ether. Pref. the cpd. with one active H atom is pref. monoalcohol (e.g. (m)ethanol, propanol, isopropanol, benzyl alcohol, cyclohexanol, etc.), monophenol (e.g. phenol, cresol, butyl phenol, naphthol, etc.), monocarboxylic acid (e.g. formic, acetic, propionic, butyric, caprylic, lauric, stearic, (meth)acrylic, oleic, benzoic, succinic acid, etc.) or thiol (e.g. (m)ethyl, allyl, oleyl or benzyl mercaptane, etc). The Lewis acid is pref. BF<sub>3</sub>, PF<sub>5</sub>, SbF<sub>5</sub>, AlCl<sub>3</sub>, SnCl<sub>4</sub>, SiO<sub>2</sub>, TiO<sub>2</sub> or complex of BF<sub>3</sub> PF<sub>5</sub> or SbF<sub>5</sub> and dimethyl ether or THF. The cyclic ether is pref. epoxide (e.g. ethylene- or propylene-oxide or epichlorohydrin) or oxetane (e.g. oxetane, 3,3-bis(chloromethyl)oxetane, etc.). The polymerisation is carried out at minus 30 deg.C to plus 60 deg.C using excess amt. of THF as a solvent or an inert organic solvent (e.g. benzene, toluene, diethyl- or dibutyl-ether).  
- USE/ADVANTAGE - The process provides polyethermonoalcohol comprising polyoxytetramethylene chain with one capped terminal quantitatively. The polyethermonoalcohol is used for prepg. polyurethane-, polyester- or polyamide-resin with high elasticity, resistance to water and cold.(0/0)  
IW - POLYETHER MONO ALCOHOL PREPARATION POLYURETHANE RESIN PREPARATION POLYMERISE THF PRESENCE ACTIVE HYDROGEN COMPOUND INITIATE CONTAIN LEWIS ACID CYCLIC ETHER  
AW - TETRA HYDRO FURAN  
PN - JP63105029 A 19880510 DW198824 004pp  
IC - C07C43/11 ; C08G65/26  
MC - A02-A04 A05-H05 E07-A02E E07-A03 E10-H01E E31-K07 E31-M E31-P03 E31-Q02 E34-C03 E35-H E35-K02  
DC - A25 E19  
PA - (HODO ) HODOGAYA CHEM IND CO LTD  
AP - JP19860249730 19861022  
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AB - PURPOSE: To easily obtain the titled alcohol wherein one of both terminals is quantitatively capped, at a low cost, by polymerizing THF in the presence of an active hydrogen-containing compound using a Lewis acid and a cyclic ether as polymerization initiators.

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I - C08G65/26 ; C07C43/11

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